CLAIMS

1. An apparatus comprising:

a de-interlacer circuit configured to generate a first progressive signal having a first rate in response to an interlaced signal;

a rate converter circuit configured to generate a second progressive signal having a second rate in response to said first progressive signal; and

a zoom circuit configured to generate an output video signal in response to said second progressive signal, wherein said output video signal represents a portion of said second progressive signal having a frame size equal to a frame size of said interlaced signal.

2. The apparatus according to claim 1, wherein said zoom circuit comprises (i) a horizontal zoom and (ii) a vertical zoom, wherein said horizontal and vertical zoom are implemented in series on said second progressive signal.

3. The apparatus according to claim 2, wherein said vertical zoom comprises a frame filtering vertical zoom.

4. The apparatus according to claim 1, further comprising:

an interlacing circuit configured to generate said output video signal having an interlaced pattern.

5. The apparatus according to claim 1, wherein said first rate comprises 60Hz and said second rate comprises 50Hz.

6. The apparatus according to claim 1, wherein said first progressive signal has a first image size and said second progressive signal has a second image size, wherein said first and second image sizes are different sizes.

7. The apparatus according to claim 6, wherein (i) said first image size comprises a first horizontal size and a first vertical size and (ii) said second image size comprises a second vertical size and a second horizontal size.

8. The apparatus according to claim 1, wherein said zoom circuit operates during recording of said interlaced signal.

9. The apparatus according to claim 1, wherein said zoom circuit operates during playback of said output video signal.

10. The apparatus according to claim 1, wherein said interlaced signal presents a first interlaced field and a second interlaced field every 1/30 of a second.

11. The apparatus according to claim 1, wherein said first progressive signal comprises frames presented every 1/60 of a second.

12. A method for implementing a zoom in a digital video signal comprising the steps of:

(A) converting an interlaced video signal to a first progressive video signal having a first rate;

(B) generating a second video signal having a second rate in response to said first video signal; and

(C) generating an output video signal in response to said second video signal, wherein said output video signal represents a portion of said second video signal having a frame size equal to a frame size of said interlaced signal.

13. The method according to claim 12, wherein step (C) comprises (i) a horizontal zoom and (ii) a vertical zoom, wherein said horizontal and vertical zoom are implemented in series on said second progressive signal.

14. The method according to claim 12, wherein said first rate comprises 60Hz and said second rate comprises 50Hz.

15. The method according to claim 12, wherein said first progressive signal has a first image size and said second progressive signal has a second image size, wherein said first and second image sizes are different sizes.

16. The method according to claim 15, wherein (i) said first image size comprises a first horizontal size and a first vertical size and (ii) said second image size comprises a second vertical size and a second horizontal size.